BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads and Drains at Fathima layout Main road in Ward no 6 Byatarayanapura Sub Division

Est Cost: =35.00Lakhs

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Fathima layout	Cum							
	1st main 0-185		2	185	0.65	0.65	156.33		
	1st cross Rhs		1	202	1.10	0.90	199.98		
							356.31	192.92	**68738.36**
	Basic rate	**82**							
	Loading and unloading with 10km lead= 68+2.5x1.28x10 = 100	**100**							
	Area Weightage 6%	**10.92**							
	Final Rate	**192.92**							
2	Removing & Refixing Stone slabs of drains and Pointing in C.M(1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2016-17)								
	BS Slab Drain	Sqm							
	1st main 0-185		2	185.00	1.35	--	499.50		
	cover		1	60.00	0.90		54.00		
	Consider 20% Missing slabs and damaged slabs						-99.90		
							453.60	80.56	**36542.02**
	Basic rate	**76**							
	Area Weightage 6%	**4.56**							
	Final Rate	**80.56**							
3	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 7.5cms thick (P.No.25, I.No.5.31.1 of PW, P&IWTD SR 2016-17)								
		Sqm							
	Consider 20% Missing slabs and damaged slabs						99.90		
							99.90	665.68	**66501.43**
	Basic rate	**628**							
	Area Weightage 6%	**37.68**							
	Final Rate	**665.68**							
4	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	Bed Concrete	Cum							
	Fathima layout								
	1st cross Rhs		1	202.00	1.10	0.10	22.22		
							22.22	5348.76	**118849.45**
	Basic rate	**5046**							
	Area Weightage 6%	**302.76**							
	Final Rate	**5348.76**							

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
5	KSRB 4-6.1: Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications. Specifcation No. KBS 4.6.2 (P.No.15, I.No.4.28 of PW, P&IWTD SR 2016-17)								
	Bottom Slab	Sqm							
	Fathima layout		2	202.00	--	0.15	60.60		
							60.60	244.86	**14838.52**
	Basic rate	**231**							
	Area Weightage 6%	**13.86**							
	Final Rate	**244.86**							
6	KSRB 4-6.4: Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surfaces such as walls at any thickness, including attached pilasters, buttresses, plinth and string courses cost of all materials, labour complete as per specifications. Specification No.KBS 4.6.2 (P.No.15, I.No.4.31 of PW,P&IWTD SR 2016-17)								
	Side Walls	Sqm							
	Fathima layout		4.00	202.00	--	0.600	484.80		
							484.80	310.58	**150569.18**
	Basic rate	**293**							
	Area Weightage 6%	**17.58**							
	Final Rate	**310.58**							
7	Providing and laying cement concrete using 20mm and downsize granite coarse aggregates and fine aggregates of ready mixed concrete (RMC) for RCC works laid in 15cms thick layers and well compacted vibrating, curing, finishing with necessary cement mortar, with all lead and lifts etc., complete (exclusive of cpost of steel and fabricaton charges) Ready Mixed Cement Concrete M 20 for Raft foundation, Column, Footing, main and secondary beams. (P.No.18, I.No.4.48 of PW, P&IWTD SR 2016-17)								
	Culvert	Cum							
	Bottom Slab								
	Fathima layout		1.00	202.00	0.90	0.15	27.27		
	Side Walls								
	Fathima layout		2.00	202.00	0.15	0.60	36.36		
							63.63	6231.74	**396525.62**
	Basic rate	**5879**							
	Area Weightage 6%	**352.74**							
	Final Rate	**6231.74**							
8	KSRB - 4.9.2: Providing TMT steel reinforcement Fe500 for R.C.C work including straightening, cutting, bending, hooking, palcing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3. (P.No.17, I.No.4.46.2 of PW, P&IWTD SR 2016-17)								
	Consider 45Kgs/cum for item No. only RCC Drain Qty	Tonne		63.63	0.045	--	2.87		
							2.87	73691.20	**211493.74**
	Basic rate	**69520**							
	Area Weightage 6%	**4171.2**							
	Final Rate	**73691**							
9	Providing and fixing **RCC Precast cover slab of 100mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	Fathima layout	Sqm							
	1st cross Rhs		1.00	202.00	0.90	--	181.80		
							181.80	1817.00	**330330.60**

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
	Data Rate =1817								
10	KSRRB M2100-1.1. Earth work in excavation for foundation of structures such as culverts, bridges etc., as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications I. Ordinary soil - A. Manual Means (i) Depth upto 3m MORTH Specification No. 304(P.No.209, I.No.27.1 of PW,P&IWTD S.R 2016-17))								
	Retaining wall	Cum							
	Up stream end & Down stream end		4	4.00	2.90	1.60	74.24		
	Basic rate	**123**					**74.24**	230.38	**17103.41**
	Loading and unloading with 10km lead= 68+2.2x1.28x10 = 100	**100**							
	Area Weightage 6%	**7.38**							
	Final Rate	**230.38**							
11	KSRB 2.8 : Providing and Filling in foundation with granite / trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift, complete as per specifications, specification. No. KBS (P.No.6, I.No.2.15 of PW,P&IWTD S.R 2016-17))								
	Retaining wall	Cum							
	Up stream end & Down stream end		4	4.00	2.90	0.30	13.92		
	Basic rate	**2114**					**13.92**	2240.84	**31192.49**
	Area Weightage 6%	**126.84**							
	Final Rate	**2240.84**							
12	KSRRB M2100-13. Plain / Reinforced Cement Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MORTH Specification No. 1500,1700 & 2100.(P.No.211, I.No.27.24 of PW,P&IWTD S.R 2016-17)								
	Retaining wall	Cum							
	Up stream end & Down stream end		4	4.00	2.30	0.15	5.52		
	Basic rate	**2114**					**5.52**	6017.76	**33218.04**
	Area Weightage 6%	**126.84**							
	Final Rate	**2240.84**							
13	Diversion of water course by providing Coffer dams or bunds or islands as may be necessary for piers and abutments foundations, bailing out or pumping water during excavation and until completion etc., complete.(beyond 1.50 mtrs depth upto & including 3m)(P.No.257, I.No.37.41.2 of PW,P&IWTD S.R 2016-17)								
		Cum	1	4.00	1.50	1.70	10.20		
	Basic rate	**330**					**10.20**	349.80	**3567.96**
	Area Weightage 6%	**19.8**							
	Final Rate	**349.8**							
14	KSRRB M2100-20.2. Plain / Reinforced Cement Concrete in Open Foundation with OPC cement design mix M35 @ 390kgs, with 20mm and down size graded granite metal coarse aggregates @0.68cum and fine aggregates @ 0.45cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008. case II : With Batching Plant, Transit Mixer and Concrete Pump MORTH Specification No. 1500,1700 & 2100(P.No.213, I.No.27.37 of PW,P&IWTD S.R 2016-17)								
	Up stream end & Down stream end	Cum	4	4.00	1.50	0.20	4.80		
			4	4.00	1.33	0.35	7.45		

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
							12.25	6838.06	**83752.56**
	Basic rate	**6451**							
	Area Weightage 6%	**387.06**							
	Final Rate	**6838.06**							
15	KSRRB M2200-5.19. Design mix M35 with OPC cement @ 390kgs,with 20mm and down size graded granite metal coarse aggregates @0.68cum and fine aggregates @ 0.45cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 - ii) For height, upto 5m,(P.No.214, I.No.28.7.18 of PW,P&IWTD S.R S.R 2016-17)								
		Cum							
	Retaining wall								
	Up stream end & Down stream end								
			4	4.00	0.38	3.55	**21.58**		
							21.58	7703.02	**166261.98**
	Basic rate	**7267**							
	Area Weightage 6%	**436.02**							
	Final Rate	**7703.02**							
16	KSRRB M2200- TMT/MS Bar Reinforcement KSRRB M2200-6. Supplying, fitting and placing TMT bar reinforcement in sub-structure complete as per drawing and Technical Specifications complete as per specificationsMORTH Specification No.1600 & 2200 - TMT Bars Fe 500(P.No.214, I.No.28.8.2of PW,P&IWTD S.R S.R 2016-17)								
		MT							
	At 110kg/cum		110			33.83	**3.72**		
							3.72	58090.12	**216183.54**
	Basic rate	**54802**							
	Area Weightage 6%	**3288.12**							
	Final Rate	**58090.12**							
17	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and si slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	1st cross		1.00	230.00	4.50	0.25	258.75		
	1st main 0-185		2.00	5.00	0.90	0.25	2.25		
			5.00	4.00	1.70	0.25	8.50		
	bad reaches		18.00	1.50	0.90	0.25	6.08		
							275.58	148.76	**40994.54**
	Basic rate	**46**							
	Loading and unloading with 10km lead= 68+2.2x1.28x10 = 100	**100**							
	Area Weightage 6%	**2.76**							
	Final Rate	**148.76**							
18	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	1st cross		1.00	230.00	4.50	0.20	207.00		
	1st main 0-185		2.00	5.00	0.90	0.20	1.80		
			5.00	4.00	1.70	0.20	6.80		
	bad reaches		18.00	1.50	0.90	0.20	4.86		
							220.46	1768.08	**389790.92**
	Basic rate	**1668**							
	Area Weightage 6%	**100.08**							
	Final Rate	**1768.08**							

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
19	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Road Portion	sqm							
	1st cross		1	230.00	4.50	--	1035.00		
	1st main 0-185		2	5.00	0.90	--	9.00		
			5	4.00	1.70	--	34.00		
	bad reaches		18	1.5	0.9	--	24.30		
							1102.30	29.68	**32716.26**
	Basic rate	**28**							
	Area Weightage 6%	**1.68**							
	Final Rate	**29.68**							
20	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	1st main 0-185		1	180.00	5.00		900.00		
	Deduct prime coat for Bad Reaches						-67.30		
							832.70	3.18	**2647.99**
	Basic rate	**3**							
	Area Weightage 6%	**0.18**							
	Final Rate	**3.18**							
21	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	For Laying DBM/ Profile Correction	Sqm							
	1st main 0-185		1	180.00	1.3	--	234.00		
	For Laying BC	Sqm							
	1st cross		1	230	4.5	--	1035.00		
	1st main 0-185		1	180.00	5.00	--	900.00		
							2169.00	12.72	**27589.68**
	Basic rate	**12**							
	Area Weightage 6%	**0.72**							
	Final Rate	**12.72**							
22	KSRRB M500-16. Providing and laying dense bituminous macadam 50-75mm compacted thickness with 4.5% VG-30 Bitumen using 40/60 TPH capacity H.M.P, using crushed aggregates of grading II, premixed with VG 30 grade bituminous binder and transporting the hot mix to work site, laying with mechanical paver to the required grade level and alignment rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10, complete in all respects complete as per specification MORTH specification No. 507 (P.No.163 I.No. 21.17.6 of PW,P&IWTD S.R 2016-17)								
	For Laying DBM/ Profile Correction	Cum							
	1st main 0-185		1.00	180.00	1.30	0.05	11.70		
							11.70	7036.28	**82324.48**
	Basic rate	**6638**							
	Area Weightage 6%	**398.28**							
	Final Rate	**7036.28**							

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
23	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	For Laying BC	Cum							
	1st cross		1.00	230.00	4.50	0.040	41.40		
	1st main 0-185		1.00	180.00	5.00	0.040	36.00		
							77.40	7270.54	**562739.80**
	Basic rate	**6859**							
	Area Weightage 6%	**411.54**							
	Final Rate	**7270.54**							
24	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line		2	410.00	0.10	--	82.00		
							82.00	542.72	**44503.04**
	Basic rate	**512**							
	Area Weightage 6%	**30.72**							
	Final Rate	**542.72**							
							Total Construction Cost		**3128975.612**
25	Add cost of **Waste Plastic** @ 8% of Bitumen weight								
	Bitumen = 141 kg/cum		--	--	--	--	**873.07**	27.00	**23573.00**
	Waste =77.4X 141 X 8 / 100 = 873.07								
26							**Cost towards PMC / Third Party inspection LS**		**31290.00**
27							**Tender Premium at 10%**		**312897.56**
								Sub Total	**3496736.17**
28							**Miscellaneous and rounding off**		**3263.83**
								Total	**3500000.00**

Certificate.

1 The workspot was inspected and work is found to be necessary.
2 The area comes within the Bruhat Bangalore Mahanagara Palike limits.
3 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
4 The provisions made in the estimate are necessary and essential.

Assistant Engineer

Assistant Executive Engineer

Executive Engineer 27/11

27/11

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ಬ.ಬ.ಮ.ಪ. ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಬ.ಬ.ಮ.ಪ., ಬೆಂಗಳೂರು-24

ADMINISTRATIVE APPROVAL

Accorded For Rs. Thirty five lakhs only

Head of A/c. P-3316

Div. Ref. No. 47/17-18 Date. 27/11/17

AE 27/11

EE(TP) 27/11

Technical Sanction
Accorded for Rs 35 lakhs only
Head of A/C P3316
CER NO 15/29/17-18 Dt. 28/11/17

TA CE (YNK)

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads and Drains at Defence Layout cross roads in ward no 06 Byatarayanapura Sub division

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Amt 35.00lakhs Rate in Rs.	Amt 35.00lakhs Amount in Rs.
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Defence layout	Cum							
	1st cross		2	170.00	0.70	0.50	119.00		
	2nd cross		2	135.00	0.60	0.50	81.00		
	3rd cross		2	140.00	0.60	0.45	75.60		
	culverts		2	7.00	2.00	1.20	33.60		
							309.20	192.92	**59650.86**
	Basic rate	**82**							
	Loading and unloading with 10km lead= 68+2.5x1.28x10 = 100	**100**							
	Area Weightage 6%	**10.92**							
	Final Rate	**192.92**							
2	Removing & Refixing Stone slabs of drains and Pointing in C.M(1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2016-17)								
	BS Slab Drain	Sqm							
	1st cross		2	70.00	1.80	--	252.00		
	2nd cross		2	130.00	1.80	--	468.00		
	3rd cross		2	120.00	1.80	--	432.00		
	Consider 20% Missing slabs and damaged slabs						-180.00		
							972.00	80.56	**78304.32**
	Basic rate	**76**							
	Area Weightage 6%	**4.56**							
	Final Rate	**80.56**							
3	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 7.5cms thick (P.No.25, I.No.5.31.1 of PW, P&IWTD SR 2016-17)								
	Defence layout	Sqm							
	1st cross		2	100	1.80	--	360.00		
	Consider 20% Missing slabs and damaged slabs						**180.00**		
							540.00	665.68	**359467.20**
	Basic rate	**628**							
	Area Weightage 6%	**37.68**							
	Final Rate	**665.68**							
4	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
	For raising/flagging								
	culverts		2	7.00	2.00	0.15	4.20		
							4.20	5348.76	**22464.79**
	Basic rate	**5046**							
	Area Weightage 6%	**302.76**							
	Final Rate	**5348.76**							
5	KSRB 5.2-3: Providing and constructing granite size stone masonry in foundation cement mortor 1:6, stone hammered dressed in courses not less than 20cms high, bond stones at 2m. apart in each course including cost of materaials, labour, curing complete as per specifications. Specifcation No. KBS 5.1.13. (P.No.23, I.No.5.6 of PW,								
	culverts		4.00	7.00	0.60	0.80	13.44		
							13.44	4438.22	**59649.68**
	Basic rate	**4187**							
	Area Weightage 6%	**251.22**							
	Final Rate	**4438.22**							
6	KSRB 15.1.1 Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. (P.No.113, I.No.15.1 of PW, P&IWTD S.R 2016-17)								
	culverts	Sqm	4.00	7.00		0.80	22.40		
							22.40	102.82	**2303.17**
	Basic rate	**97**							
	Area Weightage 6%	**5.82**							
	Final Rate	**102.82**							
7	KSRB 4-1.6: Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.6 of PW,P&IWTD S.R 2016-17)								
	Coping	Cum							
	culverts		4.00	7.00	0.60	0.100	1.68		
							1.68	5767.46	**9689.33**
	Basic rate	**5441**							
	Area Weightage 6%	**326.46**							
	Final Rate	**5767.46**							
8	Providing and fixing **RCC Precast cover slab of 250mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
		Sqm							
	culverts		2	7.00	1.80	--	25.20		
							25.20	5317.00	**133988.40**
	Data Rate =4764								
9	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW P&IWTD, S.R.2016-17)								
	Road Portion	Cum							

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
	1st cross		1	170.00	7.50	0.20	255.00		
	2nd cross		1	135.00	6.00	0.20	162.00		
	3rd cross		1	140.00	5.20	0.20	145.60		
							562.60	148.76	**83692.38**
	Basic rate	**46**							
	Loading and unloading with 10km lead= 68+2.5x1.28x10 = 100	**100**							
	Area Weightage 6%	**2.76**							
	Final Rate	**148.76**							
10	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per								
	Road Portion	Cum							
	1st cross		1	170.00	7.50	0.25	318.75		
	2nd cross		1	135.00	6.00	0.25	202.50		
	3rd cross		1	140.00	5.20	0.25	182.00		
							703.25	1768.08	**1243402.26**
	Basic rate	**1668**							
	Area Weightage 6%	**100.08**							
	Final Rate	**1768.08**							
11	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161,								
	Road Portion	sqm							
	1st cross		1	170.00	7.50	--	1275.00		
	2nd cross		1	135.00	6.00	--	810.00		
	3rd cross		1	140.00	5.20	--	728.00		
							2813.00	29.68	**83489.84**
	Basic rate	**28**							
	Area Weightage 6%	**1.68**							
	Final Rate	**29.68**							
12	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	For Laying BC	Sqm							
	1st cross		1	170.00	7.50	--	1275.00		
	2nd cross		1	135.00	6.00	--	810.00		
	3rd cross		1	140.00	5.20	--	728.00		
							2813.00	12.72	**35781.36**
	Basic rate	**12**							
	Area Weightage 6%	**0.72**							
	Final Rate	**12.72**							

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
13	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	For Laying BC	Cum							
	1st cross		1	170.00	7.50	0.040	51.00		
	2nd cross		1	135.00	6.00	0.040	32.40		
	3rd cross		1	140.00	5.20	0.040	29.12		
							112.52	8013.60	**901690.27**
	Basic rate	**7560**							
	Area Weightage 6%	**453.6**							
	Final Rate	**8013.60**							
14	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line		2	445.00	0.10	--	89.00		
							89.00	542.72	**48302.08**
	Basic rate	**512**							
	Area Weightage 6%	**30.72**							
	Final Rate	**542.72**							
								Total Construction Cost	**3121875.94**
15	Add cost of **Waste Plastic** @ 8% of Bitumen weight								
	Bitumen = 141 kg/cum		--	--	--	--	**1269.23**	27.00	**34269.00**
	Waste =112.52X 141 X 8 / 100 = 1269.23								
16								**Cost towards Design Report , PMC / Third Party inspection LS**	**31218.76**
18								**Tender Premium10%**	**312187.59**
								Sub Total	**3499551.29**
19								**Miscellaneous and rounding off**	**448.71**
								Total	**3500000.00**

Certificate.

1 The workspot was inspected and work is found to be necessary.
2 The area comes within the Bruhat Bangalore Mahanagara Palike limits.
3 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
4 The provisions made in the estimate are necessary and essential.

Assistant Engineer

Assistant Executive Engineer

Executive Engineer 27/11

ADMINISTRATIVE APPROVAL
Accorded For Rs. Thirty Five lakh only
Head of A/C P-3316
Div. Ref. No. 46/17-18 Date 27/11/17
AE 27/11 EE(BTP) 27/11

Technical Sanction
Accorded For 35.00 lakh Rs.
Head of A/C P3316
CER NO : 395 Dt:. 28/11/17
TA CE (YNK)

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Providing Cement Concrete roads and Improvements to Drains at Bhararth Nagara Cross roads near baloonfactory in ward no 06 Byatarayanapura Sub division

Amt 30.00lakhs

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Baloon Factory surrounding	Cum							
	cross road 1		1	155.00	0.50	0.50	38.75		
	cross road 2		1	130.00	0.50	0.50	32.50		
	cross road 3		1	95.00	0.50	0.50	23.75		
							95.00	186.92	**17757.40**
	Basic rate	**82**							
	Loading and unloading with 10km lead= 68+2.5x1.28x10 = 100	**100**							
	Area Weightage 6%	**4.92**							
	Final Rate	**186.92**							
2	Removing & Refixing Stone slabs of drains and Pointing in C.M(1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2016-17)								
	BS Slab Drain	Sqm							
	cross road 1		1	155	1.80	--	279.00		
	cross road 2		1	130	1.35	--	175.50		
	cross road 3		1	75	1.35	--	101.25		
	Consider 10% Missing slabs and damaged slabs						-55.58		
							500.18	80.56	**40294.10**
	Basic rate	**76**							
	Area Weightage 6%	**4.56**							
	Final Rate	**80.56**							
3	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 7.5cms thick (P.No.25, I.No.5.31.1 of PW, P&IWTD SR 2016-17)								
	Baloon Factory surrounding	Sqm							
	Consider 20% Missing slabs and damaged slabs						55.58		
							55.58	665.68	**36995.17**
	Basic rate	**628**							
	Area Weightage 6%	**37.68**							
	Final Rate	**665.68**							
4	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
	Road Portion	Cum							
	cross road 1		1	155.00	4.50	0.15	104.63		
	cross road 2		1	130.00	4.50	0.15	87.75		
	cross road 3		1	95.00	4.30	0.15	61.28		
							253.65	148.76	**37732.97**
	Basic rate	**46**							
	Loading and unloading with 10km lead= 68+2.5x1.28x10 =	**100**							
	Area Weightage 6%	**2.76**							
	Final Rate	**148.76**							
5	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	for road work								
	cross road 1		1	155.00	4.50	0.15	104.63		
	cross road 2		1	130.00	4.50	0.15	87.75		
	cross road 3		1	95.00	4.30	0.15	61.28		
							253.65	5348.76	**1356712.97**
	Basic rate	**5046**							
	Area Weightage 6%	**302.76**							
	Final Rate	**5348.76**							
6	Cement concrete pavement.Construction of un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 design mix M20/M30 , with 25mm and down size graded granite metal coarse aggregates and fine aggregtes , with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 , mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints including groove cutting charges, joint filler, separation membrane, selant								
		Cum							
	cross road 1		1	155.00	4.50	0.10	69.75		
	cross road 2		1	130.00	4.50	0.10	58.50		
	cross road 3		1	95.00	4.30	0.10	40.85		
							169.10	6217.96	**1051457.04**
	Basic rate	**5866**							
	Area Weightage 6%	**351.96**							
	Final Rate	**6218**							
7	Vaccum de-watering with vaccum pump and suction mat and compaction with skin floater clubbed with floating disc including cost of generator, HOM of machinery, Screed Vibratory, Power Floater, blade and disc etc., with all lead and lift.(P.No.177, I.No.22.7 of PW, P&IWTD SR 2016-17)								
	cross road 1	Sqm	1	155.00	4.50	--	697.50		
	cross road 2	Sqm	1	130.00	4.50	--	585.00		

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
	cross road 3	Sqm	1	95.00	4.30	--	408.50		
							1691.00	95.40	161321.40
	Basic rate	90							
	Area Weightage 6%	5.4							
	Final Rate	95.4							
							Total Construction Cost		2702271.05
8	Cost towards Design Report , PMC / Third Party inspection LS								27022.71
9							Tender Premium 10%		270227.10
							Sub Total		2999520.86
10							Miscellaneous and rounding off		479.14
							Total		3000000.00

Certificate.

1 The workspot was inspected and work is found to be necessary.
2 The area comes within the Bruhat Bangalore Mahanagara Palike limits.
3 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
4 The provisions made in the estimate are necessary and essential.

Assistant Engineer

Assistant Executive Engineer

Executive Engineer

Administrative Approval
Accorded For ..... 30-00 lakh Rs.
Head of A/C..... P3316
CER NO :.....174 Dt:... 28-11-17

TA CE (YNK)

Technical Sanction
Accorded For ..... 30-00 lakh Rs
Head of A/C..... P3316
CER NO :.....399 Dt. 28/11/17

TA CE (YNK).